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EXAMINER

CHEN, TSE W

ART UNIT PAPER NUMBER

2185

DATE MAILED: 12/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/753,798

Applicant(s)

DOSSEY ET AL.

Examiner

Tse Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 16 is objected to because of the following informalities: the “power supply sensor” on page 22, lines 16-17 was never described and henceforth, will be assumed by the examiner to be “power loss sensor” in accordance with the other similar claims and specification. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Matthews, U.S. Patent 4260362.

3. Matthews taught an invention comprising:

- receiving and failing to receive at least a threshold voltage from a power supply [FIG.4, items 26, 45, and 46];
- charging a capacitor when the threshold voltage is supplied [FIG.4, items 27, 32 and 48; column 8, lines 3-13];
- reverse biasing the diode between the power supply and capacitor [column 16, lines 24-27]; and
- detecting the reverse bias state of the diode [column 16, lines 48-53].

### *Claim Rejections - 35 USC § 103*

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 8-10, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews as applied to claim 17 above, and further in view of Cross, U.S. Patent 4,227,141.

6. Matthew's disclosed invention receives a threshold voltage and charges capacitors based upon the bias state of diodes reacting to the power-supply status. However, Matthews did not specify the use of a comparator to detect the reverse-bias state of the diode.

7. Cross's disclosed invention comprises of a battery-charging controller with charging-level monitoring.

8. As per claims 2, 9, and 18, Cross taught the detection of the reverse bias state of the diode by monitoring the voltage between the diode and the power supply [FIG.5, item 214; column 9, lines 40-43].

9. As per claims 3, 8, 10, and 19, Cross taught a power loss sensor comprising:  
a comparator with first input between the power supply and diode and second input between diode and capacitor to detect the reverse-bias state of the diode [FIG.5, item 214; column 9, lines 40-43]; and

a transistor coupled to an output of the comparator [column 9, lines 1-7].

10. An ordinary artisan at the same time the invention was made would have been motivated to look for a power-loss detecting way that would best fit the design preferences or specifications

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entailing simple components such as capacitors and diodes to minimize device space and power consumption.

11. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Matthews's teachings with the teachings of Cross to provide a method of detecting power loss with a diode-capacitor combination and monitoring the reverse-bias state of the diode.

12. Claims 4, 6, 11, 13, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews as applied to claim 17 above, and further in view of Watanabe, U.S. Patent 4467748.

13. Matthew's disclosed invention utilizes an alternating current power supply and does not comprise of a voltage signal generation.

14. Watanabe's disclosed invention includes an auxiliary-power and power-off-detection circuits.

15. As per claims 4, 11, and 20, Watanabe taught the invention being supplied direct current [FIG.5, item B; column 4, lines 27-36].

16. As per claims 6, 13, and 21, Watanabe taught the invention receiving some of the threshold voltage and generating a voltage signal [FIG.5, item 22].

17. An ordinary artisan at the same time the invention was made would have been motivated to choose the most appropriate power source to best fit design preferences or specifications and generate some kind of voltage signal for useful purpose, both entities being very common and well known in the art area.

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18. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Matthews's teachings with the teachings of Watanabe to incorporate a direct-current power supply and a voltage-signal generator as peripheral or integral components of a power-loss detector.

19. Claims 7, 14, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe and Matthews as applied to claim 21 above, and further in view of Woods, U.S. Patent 6259285.

20. Watanabe and Matthews's combined invention to detect power loss mentioned the application of various control signals. However, Watanabe and Matthews did not explicitly teach the generation of a reset signal when the voltage falls under a pre-determined threshold.

21. Woods taught an invention with various components for detecting power loss. The components comprise of a power supply circuit in series with a power monitor circuit [FIG.1, item 140] that is responsible for generating a reset signal when the voltage supplied falls under some level [column 3, line 64 to column 4, line 1]. The reset signal allows certain systems to enter a predefined "clean" state where conditions are known and thus, better controlled.

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woods, Watanabe and Matthews in order to have a system or method of detecting power loss and outputting a reset signal when an out-of-range power condition may compromise the health of system.

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23. Claims 1 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews as applied to claim 17 above, and further in view of Rosbury et. al., U.S. Patent 4385384, hereinafter referred to as Rosbury.

24. Matthews disclosed an invention utilizing diode, capacitor, and various circuitries to detect a power loss. However, Matthews did not specifically indicate the power-loss detection circuit was to be used in a network setting where the power-loss status can be communicated. The individual inventions were modular and were intended to be general for many devices that would consider power- supply loss or interruption to be a problem.

25. Rosbury taught a modem to signal the detection of power loss by opening and closing various relay contacts via a power control system that operates the appropriate communication circuitry [FIG.5; FIG.8; column 19, lines 20-34]. Rosbury was silent about the particular power control [FIG.7, item 121] system to use for power-loss detection, leaving it open to the designer.

26. An ordinary artisan at the same time the invention was made would have been motivated to look for a power-loss detection design that would utilize the capacitors in existing detection systems with other simple components (e.g., diode) that would not significantly increase the size of device. Similarly, adding the capability to communicate a power-loss condition in a detection system may be important in centralized or dependent systems where current states of all members are important in the overall operation.

27. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Matthews and Rosbury in order to be able to signal power loss over a communication link or incorporate the reverse-bias diode power-loss

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detection way unto a modem to further enhance the safety/reliability features of a system with the added status information.

28. As per claims 5 and 12, Matthews taught a resistor coupled in series with the diode [FIG.4, item 47].

29. As per claim 15, Watanabe taught a power supply integral with the device [FIG.5, item B].

30. As per claim 24, Watanabe, Cross, Matthews, Woods, and Rosbury combined taught modem.

31. As per claim 25, Watanabe, Cross, Matthews, and Rosbury combined taught method.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamada et. al., U.S. Patent 5726505, disclosed an invention to prevent current flow through a diode.

Stachura et. al. U.S. Patent 6629248, disclosed an invention to maintain secured associations through power failures.

Tailliet, U.S. Patent 6281723, disclosed an invention to control the power operations in an integrated circuit.

Watanabe, U.S. Patent 6476651, disclosed an invention to provide a power-off detection with low-power consumption and little dependence on power supply voltage.



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Bogut, U.S. Patent 3877001, disclosed an invention to indicate battery status with various comparators and an output to a transistor.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (703) 305-8580. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (703) 305-9717. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Tse Chen  
November 20, 2003



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